

CONTRACT PERIOD THROUGH FEBRUARY 28, 2004

TO: All Departments

FROM: Department of Materials Management

SUBJECT: Contract for **RADIO TESTING, ANALYZING EQUIPMENT DISTORTION
MEASUREMENT**

Attached to this letter is published an effective purchasing contract for products and/or services to be supplied to Maricopa County activities as awarded by Maricopa County on **February 06, 2003**.

All purchases of products and/or services listed on the attached pages of this letter are to be obtained from the vendor holding the contract. Individuals are responsible to the vendor for purchases made outside of contracts. The contract period is indicated above.

Wes Baysinger, Director
Materials Management

CS/mm
Attach

Copy to: Clerk of the Board
John Widener, Telecommunications
Carmen Ledesma, Materials Management

SPECIFICATIONS ON INVITATION FOR BID FOR: **RADIO TESTING, ANALYZING EQUIPMENT
DISTORTION MEASUREMENT**

1.0 **INTENT:**

The intent of this Invitation for Solicitation is to establish a contract for the items specifically listed herein. Items specified are test equipment for maintenance and interference analysis of communication equipment utilized by Maricopa County. One (1) or more units of the equipment specified herein shall be delivered to Maricopa County as requested. No material shall be delivered without a valid purchase order. Amendments, supplements and/or revisions will be effective upon receipt and approval of notice to the Department of Materials Management.

2.0 **SPECIFICATIONS, MINIMUM:**

ITEM DESCRIPTION	VENDOR PROPOSAL
(VENDOR TO STATE BELOW "COMPLY" OR "WILL NOT COMPLY")	
2.1 Spectrum Analyzer (Tektronix FSP3 w/options B1, B3, B25, K7, R5 and FS-K4 <i>or equal</i>)	
<ul style="list-style-type: none"> • Frequency range 9 KHz to 3 GHz • Frequency resolution 0.01 Hz • Frequency display with marker or frequency counter • Marker resolution span/500 • Frequency counter resolution 0.1 Hz to 10 KHz (selectable) • RMS detector with >100 dB dynamic range • Automatic test routines for measuring TOI, OBW, Phase Noise, ACP • Form fitted case with handle • Five (5) year extended warranty, inclusive of parts and labor including calibration • Residual FM F = 500 MHz, Typ. 3 Hz RBW 1 KHZ Sweep time 100 ms • Sweep Time Span > 10 HZ 2.5 ms to 16000 s Max. Deviation 1% Span 0 Hz 1 μs to 16000 s Resolution 125 ns • 3rd-order Intermodulation At 200 MHz to 3 GHz > 74 DBc, TOI > 7 DBm (typ. 10 DBm) • Second Harmonic Intercept Point At 100 MHz to 3 GHz >35 DBm • Displayed Average Noise Level At 1 MHz < - 120 DBm At 10 MHz to 1 GHz < - 142 DBm At 1 GHz to 3 GHz < - 140 DBm 	

2.0 **SPECIFICATIONS, MINIMUM:** (continued)

ITEM DESCRIPTION	VENDOR PROPOSAL
(VENDOR TO STATE BELOW "COMPLY" OR "WILL NOT COMPLY")	
<ul style="list-style-type: none"> Max. Uncertainty of Level Measurement At 128 MHz, -30 dBm <0.2 dB sigma = 0.07 dB Frequency Response At < 50 KHz < +0.5/-1.0 dB At 50 KHz to 3 GHz < 0.5 dB sigma = 0.17 dB 	
Display Nonlinearity LOG/LIN (S/N > 16dB)	
RBW < 100 KHz	
0 dB to -70 dB <0.2 dB (sigma = 0.07 dB)	
-70 dB to -90 dB <0.5 dB (sigma = 0.17 dB)	
RBW >300 KHZ	
0 dB to -50 dB <0.2 dB (sigma = 0.07 dB)	
-50 dB to -70 <0.5 dB (sigma = 0.17 dB)	
<ul style="list-style-type: none"> Electronic Attenuator Input attenuator range (mechanical) 0 dB to 75 dB in 5 dB steps Electronic attenuation range 0 dB to 30 dB in 5 dB steps Intermodulation with electronic Attenuator on at 200 MHz to 3 GHZ >74 dBc, TOI >7 dBm 	
Preamplifier 20 dB, switchable	
<ul style="list-style-type: none"> FM Measurement Demodulator Demodulation bandwidth 12.5 KHz to 10 MHz 	
Readout: Trace with frequency or RF power versus time.	
RF spectrum and table with numerical display of: Peak and rms values of deviation, modulation frequency, carrier offset, carrier power (power of unmodulated carrier)	
Frequency demodulation:	
AF DC to 5 MHz	
Deviation range 5 MHz	
Deviation Uncertainty <3% of result + residual	
FM	
Carrier power versus time:	
AF DC to 5 MHz	
Display range noise floor to +30dBm	
Max. Dynamic range	
Demod bandwidth 200 KHz 75 dB, typ.	
Display nonlinearity	
S/N >16dB 0.2 dB, typ.	

2.0 **SPECIFICATIONS, MINIMUM:** (continued)

ITEM DESCRIPTION	VENDOR PROPOSAL
(VENDOR TO STATE BELOW "COMPLY" OR "WILL NOT COMPLY")	

AF:
Range **5 MHz**
Resolution **5 digits**
Uncertainty **0.1 dB + residual AM, typ.**

- Phase Noise Measurement Software Package:

User-editable sweep settings.
Fast residual FM/öM measurements that is calculated by the software.
Storage of results and settings.
Marker function that allows easy display of numeric phase noise values.
Detailed screen printouts with editable comments for fast and detailed documentation of measurement results.

2.2 Multi-Purpose Analyzer Platform (Textronix Y350C w/option R5 *or equal*)

- Module Support:
Connect up to 4 test modules
Field interchangeable
Additional test modules supported on PCMCIA
- Display:
26 cm (10.4 in) , 640 X 480 pixel color LCD
Touch screen optimized for finger use (Does not require other tools to operate)
- Power:
Standard 120 VAC
Rechargeable batteries
DC 12 V car adapter
- Interface Ports:
RS-232 serial: 9 pin
Parallel printer: 25 pin Centronics mode
Keyboard: PS/2 compatible, Mini-Din connector
Microphone jack
Headphone jack
- File/Test Storage:
Internal memory 16 MB expandable to 128 MB
Port supports standard PCMCIA memory cards
- **5 (five) year extended warranty, inclusive of parts and labor**

Accessories Included:
User Manual
Shoulder strap
Tilt stand
AC Power Supply
Rechargeable battery
RS-232 cable
Soft Carry Case

2.0 **SPECIFICATIONS, MINIMUM:** (continued)

ITEM DESCRIPTION	VENDOR PROPOSAL
(VENDOR TO STATE BELOW "COMPLY" OR "WILL NOT COMPLY")	

2.2.1 **Transmitter and Interference Analysis Module Minimum Specifications:**

- Interference Analysis Option
AM/FM Demodulation
Interference Identification
Spectrogram with Variable Duration
Signal Strength
Noise Floor measurement
- Frequency Characteristics:
Input range 30 MHz to 2500 MHz
Internal frequency accuracy ± 0.5 ppm
Internal frequency aging ± 1 ppm/yr.
- Amplitude Range:
-114 dBm to +30 dBm
- Amplitude Display:
10 Divisions; 1 to 10 dB per division
- RF Input Overload Protection :
+30 dBm to 50 W.
- Signal Related Spurious Response:
IM3 better than -70dBc.
2nd harmonic better than -60 dBc, typ.
- FM Deviation:
 $\pm 10\%$ typ.
For deviations 2 to 10 KHz; usable to 15 KHz.
Audio frequency = maximum 3 KHz.
- Spectrum Display Modes:
Max., min., norm., avg., dual trace.
- **Five (5) year extended warranty, inclusive of parts and labor**

2.2.2 **Backhaul T1 Tester Module Minimum Specifications:**

- DS0 Activity Graph:
Monitors status of each DS0
Verify the presence of traffic
Verify signaling
- Line Coding:
AMI
B8ZS

2.0 **SPECIFICATIONS, MINIMUM:** (continued)

ITEM DESCRIPTION	VENDOR PROPOSAL
(VENDOR TO STATE BELOW "COMPLY" OR "WILL NOT COMPLY")	
<ul style="list-style-type: none"> • Framing Modes: D4 ESF • Connection Configurations: Monitor Terminate Loopback Bridge • Circuit Status Reports: T1 Pulses Line Coding Frame ID and Sync. Pattern ID and Sync. • Error Detection: Bit, CRC, Frame • Error Insertion: BVP, Bit Error, Framing • Pattern Generation and Detection: QRSS, 1-in-8, 2-in-8, 3-in-24, T1-1 (Min/Max), T1-2 (Trip Test), T1-3 (54 Octet), T1-4 (120 Octet), T1-5 (53 Octet), T1-6 (55 Octet), User defined, All zeros, All ones. • Five (5) year extended warranty, inclusive of parts and labor 	

2.3 ACCEPTANCE:

Upon successful completion of the performance period, the system shall be deemed accepted and the warranty period begins. All documentation shall be completed prior to final acceptance.

2.4 TAX:

No tax shall be levied against labor. Bid pricing to include all labor, overhead tools and equipment used, profit, and any taxes that may be levied. It is the responsibility of the Contractor to determine any and all taxes and include the same in bid price.

2.5 **VENDOR'S PROPOSAL COLUMN:**

Contractors are to complete the Vendor's Proposal Column and return it with their pricing. Failure to provide this information may result in rejection of the bid. Contractor should state that the product offered *will comply* or *will not comply*.

2.6 DELIVERY:

Delivery is required F.O.B. Destination, freight pre-paid within ninety (90) days of receipt of Purchase Order, to any delivery location within Maricopa County as specified by the County.

2.7 ACCEPTANCE:

Once the Materials have been delivered, the Using Agency shall have a reasonable opportunity to inspect them. The Using Agency shall have five (5) days to perform its acceptance testing and inspection of the Materials, after which time the Materials shall be deemed accepted unless the Using Agency rejects the Materials.

2.8 WARRANTY:

The minimum warranty period shall be *five (5) years* for both parts and labor. Warranty repair and/or replacement will be performed at no additional charge to Maricopa County. All warranty periods shall begin upon acceptance by the Using Agency. Bidder shall provide all appropriate information to the County for full compliance with warranty terms.

2.9 **BRAND NAME:**

Bids on brands other than those listed are subject to approval based on evaluation. Maricopa County reserves the right to request samples to determine quality and acceptability of products bid. In some cases brands have been listed to define quality of products desired and is not intended to be restrictive or limit competition. Products substantially equivalent to those designated shall qualify for consideration.

2.10 OPERATING MANUALS:

Upon delivery, Contractor shall provide comprehensive operational manuals, Materials service manuals, and schematic diagrams, if required by the Using Agency.

2.11 TECHNICAL AND DESCRIPTIVE SALES LITERATURE:

Contractor shall provide copies of its sales literature and brochures, and copies of any manufacturer's technical and descriptive literature regarding the material it proposes to provide. Literature shall include sufficient in detail to allow full and fair evaluation of the offer submitted, and must be included with the bid. Failure to include this information may result in the bid being rejected.

2.12 CONTRACTOR REVIEW OF DOCUMENTS:

Contractor shall review its bid submission to assure the following requirements are met.

- 2.12.1 **One (1) original and one (1) copy** of all submissions is **MANDATORY**
- 2.12.2 **Vendor proposal column/section, MANDATORY**
- 2.12.3 **Pricing pages, MANDATORY**
- 2.12.4 Copies of Catalogs/Pricing Documents (if required)
- 2.12.5 Literature, Technical and Descriptive, **MANDATORY**
- 2.12.6 Vendor Information, **MANDATORY**
- 2.12.7 Agreement page, **MANDATORY**

2.13 MODEL YEAR EQUIPMENT:

The County will only accept bids offering current model year/version equipment/product.

3.0 **SPECIAL TERMS & CONDITIONS:**

3.1 CONTRACT LENGTH:

This Invitation for Bids is for awarding a firm, fixed price purchasing contract to cover a one (1) year period.

3.2 SHIPPING:

Bid prices shall be made F.O.B. destination to the Using Agency within Maricopa County. The Contractor shall retain title and control of all goods until they are delivered and the contract coverage has been completed. All claims for visible or concealed damage shall be filed by the Contractor. The County will notify the Contractor of any damaged goods and shall assist the Contractor in arranging for inspection.

3.3 SHIPPING DOCUMENTS

A packing list or other suitable shipping document shall accompany each shipment and shall include the following:

- (1) Name and address of the Contractor;
- (2) Name and address of the County Agency;
- (3) County purchase order number;
- (4) A description of material shipped, including item number, quantity, number of containers and package number, if applicable.

3.4 PRODUCT DISCONTINUANCE:

In the event that a manufacturer discontinues a product and/or model, the County may allow the successful Contractor to provide a substitute for the discontinued item or may cancel the Contract. If the Contractor requests permission to substitute a new product or model, it shall provide the following to the County:

- 3.4.1 Documentation from the manufacturer that the product of model has been discontinued.
- 3.4.2 Documentation that names the replacement product or model.
- 3.4.3 Documentation that provides clear and convincing evidence that the replacement meets or exceeds all Specifications required by the original Invitation for Bids.
- 3.4.4 Documentation that provides clear and convincing evidence that the replacement will be compatible with all the functions or uses of the discontinued product or model.
- 3.4.5 Documentation confirming that the price for the replacement is the same as or less than the discontinued product or model.

Product discontinuance applies only to those items specifically listed on any resultant contract. This will not apply to catalog items not specifically listed on any resultant contract.

3.5 ORDERING AUTHORITY

Contractors should understand that any request for purchase of materials or services shall be accompanied by a valid purchase order, issued by Materials Management, or by a CAPA (Certified Agency Procurement Aid). **CAPA purchases are limited to values of less than \$2,500.00. No other request is valid.**

3.6 PROCUREMENT CARD ORDERING CAPABILITY:

It is the intent of Maricopa County to utilize the Bank of America MasterCard Procurement Card, or other procurement card that may be used by the County from time to time, to place and make payment for orders under the Contract. Contractors without this capability may be considered non-responsive and not eligible for award consideration.

3.7 INQUIRIES AND NOTICES:

All inquiries concerning information herein shall be addressed to:

MARICOPA COUNTY
DEPARTMENT OF MATERIALS MANAGEMENT
ATTN: CONTRACT ADMINISTRATION
320 W. LINCOLN ST.
PHOENIX, AZ 85003

Administrative telephone inquiries shall be addressed to:

STAN FISHER, SENIOR PROCUREMENT CONSULTANT, 602-506-3274
(sfisher@mail.maricopa.gov)

Technical telephone inquiries shall be addressed to:

John Widener, Technical Manager, Maricopa County Wireless Systems
602-506-1193

Inquiries may be submitted by telephone but must be followed up in writing. No oral communication is binding on Maricopa County.

4.0 CONTRACT TERMS AND CONDITIONS:

4.1 LANGUAGE FOR REQUIREMENTS CONTRACTS:

Contractors signify their understanding and agreement by signing this document, that the Contract resulting from this bid will be a requirements contract. However, this Contract does not guarantee any purchases will be made. It only indicates that if purchases are made for the materials contained in this Contract, they will be purchased from the Contractor awarded that item. Orders will only be placed when a need is identified by a Using Agency or department and proper authorization and documentation have been approved.

The Department of Materials Management reserves the right to cancel Purchase Orders within a reasonable period of time after issuance. Should a Purchase Order be canceled, the County agrees to reimburse the Contractor but only for actual and documentable costs incurred by the Contractor due to and after issuance of the Purchase Order. The County will not reimburse the Contractor for any costs incurred after receipt of County notice of cancellation, or for lost profits, shipment of product prior to issuance of Purchase Order, etc.

Contractors agree to accept verbal notification of cancellation from the Department of Materials Management with written notification to follow. By submitting a bid in response to the Invitation For Bids, the Contractor specifically acknowledges to be bound by this cancellation policy.

4.2 UNCONDITIONAL TERMINATION FOR CONVENIENCE:

Maricopa County may terminate the resultant Contract for convenience by providing sixty (60) calendar days advance notice to the Contractor.

4.3 TERMINATION FOR DEFAULT:

If the Contractor fails to meet deadlines, or fails to provide the agreed upon service/material altogether, a termination for default will be issued. The termination for default will be issued only after the County deems that the Contractor has failed to remedy the problem after being forewarned.

4.4 TERMINATION BY THE COUNTY:

If the Contractor should be adjudged bankrupt or should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, the County may terminate this Contract. If the Contractor should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to provide enough properly skilled workers or proper materials, or persistently disregard laws and ordinances, or not proceed with work or otherwise be guilty of a substantial violation of any provision of this Contract, then the County may terminate this Contract. Prior to termination of this Contract, the County shall give the Contractor fifteen (15) calendar days written notice. Upon receipt of such termination notice, the Contractor shall be allowed fifteen (15) calendar days to cure such deficiencies.

4.5 STATUTORY RIGHT OF CANCELLATION FOR CONFLICT OF INTEREST:

Notice is given that pursuant to A.R.S. § 38-511 the County may cancel this Contract without penalty or further obligation within three years after execution of the contract, if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the County is at any time while the Contract or any extension of the Contract is in effect, an employee or agent of any other party to the Contract in any capacity or consultant to any other party of the Contract with respect to the subject matter of the Contract. Additionally, pursuant to A.R.S § 38-511 the County may recoup any fee or commission paid or due to any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the County from any other party to the contract arising as the result of the Contract.

4.6 OFFSET FOR DAMAGES;

In addition to all other remedies at Law or Equity, the County may offset from any money due to the Contractor any amounts Contractor owes to the County for damages resulting from breach or deficiencies in performance under this contract.

4.7 ADDITIONS/DELETIONS OF SERVICE:

The County reserves the right to add and/or delete materials to this Contract. If a service requirement is deleted, payment to the Contractor will be reduced proportionately, to the amount of service reduced in accordance with the bid price. If additional materials are required from this Contract, prices for such additions will be negotiated between the Contractor and the County.

4.8 SUBCONTRACTING:

The Contractor may not assign this Contract or Subcontract to another party for performance of the terms and conditions hereof without the written consent of the County. All correspondence authorizing subcontracting must reference the Bid Serial Number and identify the job project.

The Subcontractor's rate for the job shall not exceed that of the Prime Contractor's rate, as bid in the pricing section, unless the Prime Contractor is willing to absorb any higher rates. The Subcontractor's invoice shall be invoiced directly to the Prime Contractor, who in turn shall pass-through the costs to the County, without mark-up. A copy of the Subcontractor's invoice must accompany the Prime Contractor's invoice.

4.9 AMENDMENTS:

All amendments to this Contract must be in writing and signed by both parties.

4.10 RETENTION OF RECORDS:

The Contractor agrees to retain all financial books, records, and other documents relevant to this Contract for five (5) years after final payment or until after the resolution of any audit questions which could be more than five (5) years, whichever is longer. The Department, Federal or State auditors and any other persons duly authorized by the Department shall have full access to, and the right to examine, copy and make use of, any and all said materials.

4.11 ADEQUACY OF RECORDS:

If the Contractor's books, records and other documents relevant to this Contract are not sufficient to support and document that allowable materials were provided, the Contractor shall reimburse Maricopa County for the materials not so adequately supported and documented.

4.12 AUDIT DISALLOWANCES:

If at any time it is determined by the Department that a cost for which payment has been made is a disallowed cost, the Department shall notify the Contractor in writing of the disallowance and the required course of action, which shall be at the option of the Department either to adjust any future claim submitted by the Contractor by the amount of the disallowance or to require repayment of the disallowed amount by the Contractor forthwith issuing a check payable to Maricopa County.

4.13 VALIDITY:

The invalidity, in whole or in part, of any provision of the Contract shall not void or affect the validity of any other provision of this Contract.

4.14 RIGHTS IN DATA:

The County shall have the use of data and reports resulting from this Contract without additional cost or other restriction except as may be established by law or applicable regulation. Each party shall supply to the other party, upon request, any available information that is relevant to this Contract and to the performance hereunder

IN-PHASE TECHNOLOGIES INC., 9 TRENTON-LAKEWOOD ROAD, CLARKSBURG, NJ 08510

WILLING TO ACCEPT FUTURE SOLICITATIONS VIA EMAIL: ☒ YES ☐ NO

WILL YOUR FIRM ACCEPT A PROCUREMENT CARD FOR INVOICE PAYMENT? ☐ YES ☒ NO

OTHER GOV'T. AGENCIES MAY USE THIS CONTRACT: ☒ YES ☐ NO

PRICING SHEET C662506/ **B0700049** / NIGP 73032

PRICING:

NOTE: DO NOT INCLUDE SALES/USE TAX IN YOUR BID PRICE. The percentage of sales/use tax applicable to this contract will be listed on the purchase order and allowed at time of payment. BIDDERS CERTIFY BY SIGNING THIS AGREEMENT THAT PRICES BID ARE F.O.B. DESTINATION IN ACCORDANCE WITH THE TERMS AND CONDITIONS SET FORTH HEREIN.

ITEM DESCRIPTION

UNIT PRICE

1. Spectrum Analyzer, complete, as defined in Section 2.1:

\$28,105.00/ea.

Bidder shall state manufacturer and product # (s) of equipment offered below:

R&S (Rhode + Schwarz)

2. Multi-Purpose Analyzer Platform, complete, as defined in Sections 2.2, 2.2.1 & 2.2.2:

\$21,700.00/ea.

Bidder shall state manufacturer and product # (s) of equipment offered below:

Tektronix

3. Bidder shall state delivery in days, of all equipment, ARO: 8/Weeks/40 business days

4. Indicate percent of discount offered for related optional equipment not specified in this solicitation:

Discount off list 0%. Define the applicable listing and the effective date of the listing: _____

RESPONDENTS ARE REMINDED TO CAREFULLY REVIEW ALL SPECIFICATIONS, TERMS AND CONDITIONS, AND THAT WARRANTY REQUIRED IS FOR FIVE (5) YEARS

VENDOR DESCRIPTION

Program Description

Customer requires Tektronix and Rhode & Schwartz instruments for use in a radio test-set application. The customer has specified COTS (commercial off the shelf) instruments and provided the manufacturers options and specifications. Consequently, providing the instrumentation part numbers and options specified will result in a compliant bid.

Cost Detail

<u>Item/Option</u>	<u>Description</u>	<u>Cost</u>
FSP3	3GHz Spec An	\$ 19,330.00
B3	AM/FM Demod	\$ 570.00
B1	Case	\$ 255.00
B25	0-30dB attenuator	\$ 2,300.00
K7	FM Demod S/W	\$ 1,730.00
R5	5-Year Warranty	\$ 780.00
FS-K4	Phase Noise S/W	\$ 3,140.00
<i>TOTAL</i>		<i>\$ 28,105.00</i>

IN-PHASE TECHNOLOGIES INC., 9 TRENTON-LAKEWOOD ROAD, CLARKSBURG, NJ 08510

Y350C	Color Msmt Main Frm	\$	5,400.00
R5	5-Year Warranty	\$	650.00
YBT250	BTS xmitttr Tester	\$	6,950.00
YBT250-IN1	Interference Msmt	\$	2,600.00
YBT250-R5	5-Year Warranty	\$	800.00
YBT1	T1 Tester	\$	4,700.00
YBT1-R5	5-Year Warranty	\$	600.00
Total		\$	21,700.00
Grand Total		\$	49,805.00

Delivery:

8 weeks ARO

Terms

Net/30, FCA: Clarksburg NJ. Shipping: PPA, FedEx or Truck. Taxes, if applicable are not included. Payment on partial shipments will be considered acceptable unless otherwise noted on purchase order.

Warranty:

In-Phase Technologies warrants that its' work product shall be free from defects in workmanship for a period of one (1) year from date of shipment.

This quotation shall remain valid for 60 days from the date on page 1.

Terms:	NET 30
Federal Tax ID Number:	22-3373452
Vendor Number:	223373452
Telephone Number:	609/259-8555
Fax Number:	609/259-8556
Contact Person:	ED MACMULLEN
E-mail Address:	info@in-phasetech.com
Company Web Site:	www.in-phasetech.com
Contract Period:	To cover the period ending February 28, 2004.